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BLACKBIRD DEPREDATIONS IN ANIMAL INDUSTRY: POULTRY RANGES AND HOG LOTS

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I'm going to move over onto poultry ranges, turkey ranges and hog farms where we have species of birds such as the herring gull, the pigeon, the starling and English sparrow.

As a rule, these birds travel relatively great distances from roosts and loafing areas out to the feeding ranges. And why shouldn't they? There is ample high energy food available and usually lack of human disturbance. So they frequent these places during the daylight hours.

Actually the losses from these operations are pretty hard to evaluate. Sometimes it is direct, the farmer feels the impact; other times it's indirect. We do suspect diseases being carried onto the poultry range or hog farm by these wild birds.

Let's examine these four species and find where the damage occurs. I'll tell you what we are doing to reduce this damage. The herring gull, in this part of the country (midwest-Great Lakes) and also along the Atlantic Coast, is increasing in numbers by leaps and bounds. Also the herring gull has become a bum. In its original environment, it foraged along the shoreline and behind fishing vessels and it did very well. Now he's turned into a bum, because we've turned into bums. Our unsanitary ways of managing dumps and hog lots have made things ideal for the herring gull and he's adjusted very nicely to these conditions. Consequently, he's moved onto hog lots where they cook garbage and dump it onto the land. He also follows garbage feeding trucks through the hog lots where they dump cooked garbage into the feeding troughs. The gull is taking food from the hogs and from the farmer. Also because he visits the dump, then goes to the hog lot, he is also carrying such transmissible diseases as hog cholera. Also herring gulls are suspected of carrying TGE (transmissible gastroenteritis). Because they perch upon farm buildings, gulls are also adding to structural deterioration.

We have been very successful in controlling gulls by issuing kill permits to farmers and instructing them in the use of crackershells. The farmer can go out then and shoot a couple of gulls, and the gulls

react very fast to this. Gulls have a spook factor of about three hours, they'll react very fast to one of their kind being killed or a cracker-shell exploding in their midst. This will move them out of the area. They will not quickly return.

Another problem we find with herring gulls is population turnover. This is terrific in gull populations. Unless gulls are marked, you really have no way of knowing which group you may be dealing with; "Did the group that you irritated and chased away ever return? " Our marking efforts have shown that there is daily turnover. If you "educate" a group of birds one day, you are likely to have an altogether different group the following day. So control has to be a continuing operation. It is successful if the farmer goes out when the gulls arrive, kills one or two birds, and fires his crackershells into the group. Killing permits are issued only to the farmer after the area has been surveyed and killing of a migratory bird can be justified.

The herring gull also has a heyday where chickens, ducks, and turkeys are concerned. On open range, a farmer generally loads his feed pellets into a truck and drives over the range placing feed with an automatic feed distributor. This feed on the ground attracts gulls to the area to feed either on the large turkey pellet, the smaller poultry pellet, or the soft duck pellet.

We had outbreaks along the coast of Maine of fowl typhoid and fowl cholera because gulls feed in dumps where the disease is present and then transmit it to the feeding ranges.

They also transmit chronic respiratory disease (CRD) which is a real danger to the poultry industry. Right now we're working in Minnesota where herring gulls are suspected of transmitting "blue comb" disease, a serious disease of turkeys. We're cannon-netting gulls to find if they carry the disease, and are also trying to infect them experimentally to see if they are capable of transmitting it. Bronchitis is another disease the gull is known to transmit.

Here again, we can use kill permits and crackershell technique to get some measure of control by frightening. Turkeys will stampede once or twice when crackershells are fired over their heads, but they soon adjust and settle down.

The starling is really a dirty bird. Don Balser didn't mention it, but 30% of the feed eaten by the starling is utilized, and 70% passes right through the bird unused. So there is really a great deal of contamination to the food and water. The starling in hog lots is a strong suspect of transmitting TGE; it hasn't been proven yet, but he is number one suspect. The hog industry suffers a several million dollar loss yearly from TGE.

Starling food consumption is very high. Some Denver feeding tests showed that one starling would eat 42 pellets at a sitting. This food passes through the bird in 1 to 1-1/2 hours, with only 30% being used, so you can imagine the amount of contamination going on in feeders

and waterers. Hogs and poultry will kick aside food contaminated by starlings; they refuse to eat it.

Starlings carry chronic respiratory disease, bronchitis, and also lice and mites which are an important factor in the buildings where poultry live. In all these areas we've been talking about, we have a conditioning process going on; starlings are adjusting to processed feed which is used in the animal industry. This is to our favor, because we have ready-made baits available then. All we have to do is treat some poultry pellets with the material we want to use against starlings.

It is difficult to say which pellet is best for starling bait; the starlings decide this by feeding on the pellets at the farm they're raiding. Some pellets are commercial and standardized, but others may be made by the farmer. We generally find out what the birds are eating and then recommend treatment of the food they habitually feed upon.

We also recommend that the bait area for starlings be enclosed within the enclosure fencing in the poultry. We will pile many pounds of pellets on the ground inside an enclosure on the poultry range, being careful to keep the toxic pellets away from the perimeter so the poultry cannot reach it. There must be poultry on the range for this technique to work. You can't take an empty range and expect starlings to feed.

Here is an example of a nonlethal technique. Eighty per cent of ducks raised in this country are raised on Long Island, New York. We found that we could not outguess the starling as to which duck range they would stage on at dusk before they entered their roosts. They would pick a different one each night, filling up on duck feed. We would think we guessed where they would come in, and were set up with enclosures on certain ranges, and they passed us over. We found we could lick this problem by closing all duck feed hoppers at evening before the starlings arrived. The farmers fought us on this, because they thought the ducks had to feed constantly. We finally convinced them that they were losing more feed by leaving hoppers open. So they closed them until the starlings had passed through. Then they could open them after dark so the ducks could feed.

We have been rather successful on duck ranges with carbide exploders. On the first few shots, the ducks and hens will squat, but they adjust to this readily. We have not found any bloodshot eggs as a result of carbide exploders going off over the birds on the range all day long. As a rule we have reduced starling populations successfully using this enclosure within an enclosure with a poison bait.

House sparrows are really an easy problem. There is practically no flock turnover; bothersome birds are usually resident populations. They will arrive at a place, stay there and feed, and roost. They are easy to control. They do contaminate some of the food and water set out for poultry, because they are small and can get into feeders. Their consumption is fairly high despite their small size. They will carry such diseases as chronic respiratory disease and bronchitis. They

bring in lice and mites when they nest inside building. House sparrows are grain consumers and we have been able to control them by placing bait on elevated feeding platforms, which adds to the selectivity of control.

The last problem is the domestic pigeon. These will visit hog farms and we again have the problems of food consumption and fecal contamination. Pigeons will carry CRD (chronic respiratory disease) which can be transmitted to domestic fowl. To get more information, pigeons from municipal areas have been turned over to poultry pathologists so that they can, on a random sample basis, find out what diseases the pigeons are carrying. We know that pigeons will fly from the cities out to the countryside during daytime to feed on duck and poultry ranges.

Here, again, we have a conditioning process going, with pigeons adjusting to domestic fowl feeds. We don't have to look far to find suitable bait. The pigeon is a quick feeder on grain bait and toxicants. We have a very selective program in reducing pigeon populations. The social structure of the pigeons makes programs more complete. By eliminating a farmlot group of pigeons, we can be assured that the farm will be "clean" for a time. There is little flock turnover, and there will be no reinvasion until the social structure reestablishes itself. Also we have no spook factor with a pigeon population, and we can use a lethal material which knocks the birds down in the feedlot. The dead birds are then easy to recover and dead birds have little effect on others feeding.

I have covered this fairly rapidly. As most of you have guessed, these problems could be easily resolved if the farmers would institute confinement rearing. This is being used in the east, among hog lots in the Midwest. This is the coming thing. And it will eliminate the food consumption problems, the contamination and disease factors. This will be a long time coming, and until we reach that point, we will have to use the tools we have available. There will be a continual pest bird problem until everyone is in the confinement rearing business.

DISCUSSION

H. COLEMAN: What chemical toxicant are you using in these poultry lots?

C. FAULKNER: We have been using strychnine. We have been authorized to use DRC-1339 experimentally. DRC-1339 can be used experimentally now on cattle, hog, and poultry feedlots. We are just getting into this; we have received our experimental material, but are waiting for the right set of conditions where we can test it. The Research Division of the Bureau furnishes us with guidelines which we should satisfy before an application, so we can't just use it anywhere.

H. COLEMAN: Then the pellets you were making on these farms were strychnine?

C. FAULKNER: Yes, we use their pellets and corn oil in a cement mixer. We make up the bait right there.

R. SMITH: I might add that you should avoid using strychnine around hog lots, because hogs will feed on killed birds and hogs are very susceptible to strychnine. I have found that size and color of the pellets will determine your success, also. In one test, we used some prepared bait from Minneapolis, and mixed this in with regular pelleted feed. When we placed this in the baiting area, the starlings took every untreated pellet and left the toxic ones for us to pick up. Color was the only difference, and it was slight.

J. STECKEL: Do I understand that you go to the farm lot and find out what kind of feed the birds are taking, then you tell the farmer to take this chemical and you put it on your feed and that's your bait. What chemical is this?

C. FAULKNER: Strychnine. You can buy strychnine sulfate at drug stores. You can buy larger volumes from some of the drug manufacturers.

J. STECKEL: And you can then put this toxicant on the feed and make a bird bait.

R. SMITH: As long as the farmer doesn't violate state regulations. If he's working with federally unprotected birds, the state regulations on these birds will be in force.

C. FAULKNER: In other words, birds which are protected by neither state or federal law, and the farmer is on his own lands, and the state is one which will authorize the killing of birds--some states do not yet. . . .

J. STECKEL: What per cent of strychnine are you talking about?

C. FAULKNER: 0.6% coating.

DR. SPEAR: Does the label on the product give this information, Ki?

C. FAULKNER: Strychnine sulfate? No. We are giving them a formula. We have registered 0.6% strychnine alkaloid on corn, and are thinking about registering pelleted bait, but we're going to run into troubles, because as Dick said, every pellet is a little bit different.

Every commercial pellet is different in size, color, texture. In the 1339 work, we used what we thought was a standard hog supplement pellet. We figured that all Dick would have to do would be dilute the prepared toxic bait with untreated feed bait. But it didn't work out that way. We ended up sending Dick the concentrate so he could treat the local pellets.

DR. SPEAR: Hopefully, then, the DRC-1339 label would take all this into consideration.

C. FAULKNER: Yes, I think so, eventually. As we develop more finesse in bird control, we will have a packaged bait which will take care of most problems. But we still need flexibility, in certain cases where the birds won't adjust--we will have to treat the food on which the birds are accustomed to feeding.

DR. SPEAR: But at this time we do not have a label on strychnine to permit us to do this.

C. FAULKNER: We do not have a label for strychnine treated pellets--correct. We have a label for strychnine-cracked corn and strychnine-whole corn.

DR. SPEAR: Do you have a label for strychnine?

C. FAULKNER: No. We can't sell strychnine.

DR. SPEAR: Does anybody have a label on strychnine for this use?

R. SMITH: Not for this use.

DELEGATE: In California, the work is done under the supervision of the Agriculture Commissioner. The agricultural commissioner of the county will mix the bait and will sell it to the individual at cost. He will also supervise the application of the work. He has the registration with the state for this bait.

DELEGATE: What is the possibility of meat contamination from strychnine or DRC-1339?

C. FAULKNER: First of all, I can answer that for strychnine, when a bird takes strychnine, it dies very fast. If it's given to a duck, the duck's neck is extended, and it doesn't take too long; they're dead in a hurry. You don't eat those anyway. On the hog lot project, I hope that I made it clear that where we are baiting for pest birds, the domestic animals are protected. We build an enclosure to prevent contact of the toxicant by the domestic animals. This applies to all the areas we work.

We make an enclosure within the animal enclosure which excludes the domestic livestock that we're protecting.

R. SMITH: The problem with hogs is that they'll eat dead birds, so I would avoid using strychnine around hogs. Hogs are very susceptible to strychnine and only a few strychnine-killed birds may kill a hog. Though Ki might disagree with me, I don't think that strychnine is a good toxicant for starlings. The main reason is that you introduce a spooking factor; there are other baits. Sodium fluoride, which, if you can get it into the birds, works much better, I feel.

DR. GILTZ: May I point out something about the use of strychnine? There are questions about the use which is confusing. If you use the toxicant at 0.6%, what is the percentage which makes up 100%, water? If you are using strychnine sulfate, it isn't soluble in water. With cracked corn bait, success is going to depend on how much cracked corn you get strychnine to stick to. And if you can get starlings to eat it, they might die right there. With pigeons taking the bait, they might fly downtown before they die. Mixing it must be a pretty questionable thing.

C. FAULKNER: First of all, we're talking about coating and not blending. With coating you are working on a volume basis. Also our formulas are set up so that 15 kernels of strychnine treated cracked corn is a lethal dose. We cannot kill pigeons with one kernel of strychnine treated corn at 0.6%. This is strychnine alkaloid. We do not use strychnine sulfate.

DR. GILTZ: Is strychnine alkaloid treated corn available to the public?

C. FAULKNER: Yes, it is, through the Bureau's animal control fund.

DR. GILTZ: The point was made a while ago, that strychnine sulfate was available at drug stores. Many farmers are using strychnine sulfate. They may have a druggist friend who can get it for them. They are killing a lot of birds; they don't know how many. They are having a lot of trouble getting the toxicant to stick to the bait. Their only formula is: get plenty on.

[Additional discussion on page 120.]